PHILIPS

Philips Medical Systems

SERVICE MANUAL
742
UNIT

Replacement of the PCB mA-Control

4512 104 97461

DMC Hamburg

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SERVICE MANUAL - UNIT

Replacement of the PCB mA-Control

Author: Thorsten Frenschek

Type No: 4512 104 97461

In case there are any questions concerning this manual,
please send this LOPAD via fax to 49/(0)40/5078 2481

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List of pages and drawings (LOPAD)

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Replacement of the PCB mA-Control

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1. INTRODUCTION AND TECHNICAL DATA

1.1. PURPOSE OF MANUAL

When PCB mA-Control (4512 108 05941 ... 9) is ordered from the service, the service sends a new PCB mA-Control with installed mA-software EZ119 D800 because the new PCB mA-Control (4512 178 00181) is not compatible with the old mA-software (4512 113 00212).

1.2. ITEM SUPPLIED

4512 104 97461 Kit “Replacement of PCB mA-Control”

Consists of:

- 4512 178 00181 mA-Control (EZ 119)
- 4512 113 20221 mA-software (EZ 119 D800)
- 4512 984 27631 This manual

1.3. COMPATIBILITY

The new PCB mA-Control is compatible with all versions PCB mA-Control 4512 108 0594x

1.3.1. Tools/material required

Standard set of service tools and service PC.

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1.4. SAFETY INFORMATION

The general legal and factory safety recommendations for this X-ray equipment and the following recommendations must be strictly observed!
Start of installation, operation and maintenance work and especially electrical work must only be executed by trained and authorized persons. This equipment must only be serviced by properly educated service specialists who have received general and system-specific training as performed by Philips Medical Systems.

WARNING

The system/component must be switched OFF during replacement work.
Any X-ray unit produces ionizing radiation which may be harmful if not properly controlled. Therefore, it is recommended that this equipment be operated in accordance with the guidelines set down by the national council on radiation protection.

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2. INSTALLATION

2.1. GENERAL

WARNING

When handling PCBs take all necessary electro static discharge (ESD) precautions!

2.2. PREPARATORY WORK

- Turn OFF the generator.
- Wait about one minute for the DC capacitors on-board to be discharged.
- Remove PCB mA-Control EZ119 (4512 108 0594x).

2.3. DISPOSAL

- Dispose the old PCB including the firmware according to local regulations.

2.4. MODIFY THE DOCUMENTATION

- Modify the firmware 12NC to 4512 113 00221 on the customer card *("Stammkarte")* (printed on yellow cardboard) and the copy of the customer card (fixed on the cover of converter group EQ in the generator) by hand.

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3. INSTALLATION AND SETTING-TO-WORK OF THE NEW PCB

Replacement mA control PCBs come empty, there is no tube type loaded.

- Set the battery jumper W5 into the ON position.
- Insert the new mA control PCB.

3.1. PREPARATION OF THE GENERATOR, SYSTEM DEPENDENT

BuckyDiagnost TH /TH2 with Bucky controller:

- Remove system CAN connection EZX43 (43-1) and signal bus EZX23.

EasyDiagnost systems with BuckyDiagnost at CS:

- Remove system CAN connection EZX42 (42-1) and EZX43 (43-1) and signal bus EZX23.

DigitalDiagnost:

- Remove system CAN connection EZX42 (42-1) and EZX43 (43-1) and signal bus EZX23.

Thoravision:

- Remove system CAN connection EZX42 (42-1) and EZX43 (43-1) and signal bus EZX23.

3.2. PROGRAMMING OF THE TUBE(S)

- Switch the generator ON.

The generator desk only displays PHILIPS OPTIMUS and fills the APR fields with dots.

- Establish the PC connection and start AGenT (or XRGSCOPE, if still in use).
- Program the tube type(s).
  Wait until the PC screen asks for a generator reset.

3.3. TUBE ADAPTATION

- Modify one RGDV which at this point has no Bucky controller programmed, the “syncmaster present” must be set to “no”.
- Adapt the tube(s).

3.4. SYSTEM AND GENERATOR TESTS

- Switch the generator OFF.
- Re-establish the system connections.
- Switch the generator ON.
- Set the modified RGDV settings back to normal.

3.5. FINAL TEST

- Run different applications like exposures, fluoroscopy etc.

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